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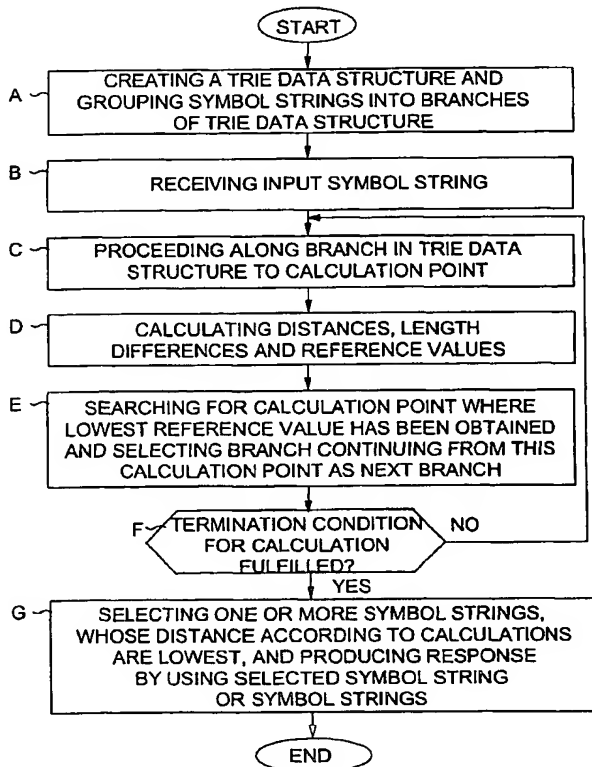
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[Continued on next page]

(54) Title: **SEARCHING FOR SYMBOL STRING**



(57) Abstract: The present invention relates to a method for searching for an input symbol string, comprising receiving (B) an input symbol string, proceeding (C) in a trie data structure to a calculation point indicated by the next symbol, calculating (D) distances at the calculation point, selecting (E) repeatedly the next branch to follow (C) to the next calculation point to repeat said calculation (D). After the calculation (G), selecting the symbol string having the shortest distance to the input symbol string on the basis of the performed calculations. To minimize the number of calculations, not only the distances are calculated (D) at the calculation points, but also the smallest possible length difference corresponding to each distance, and on the basis of each distance and corresponding length difference a reference value is calculated, and the branch is selected (E) in such a manner that next the routine proceeds from the calculation point producing the lowest reference value.

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SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG,*

ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

— *of inventorship (Rule 4.17(iv)) for US only*

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INTERNATIONAL SEARCH REPORT

International Application No.

PCT/FI 03/00540

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: G06F 17/30

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-INTERNAL, WPI DATA

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 1052576 A2 (MATSUSHITA ELECTRIC IND CO, LTD), 15 November 2000 (15.11.00), page 2, line 5 - line 8; page 3, line 19 - line 25; page 3, line 30 - page 4, line 55, page 5, line 50 - page 11, line 11, claims 1-3, abstract	1,5-7
Y	--	2-4
X	US 5377281 A (BALLARD, B.W. ET AL), 27 December 1994 (27.12.94), column 7, line 27 - line 36; column 7, line 60 - column 8, line 52, abstract	1,5-7
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☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	SHANG, H. et al.: Tries for Approximate String Matching. IEEE Transactions on Knowledge and Data Engineering, vol.8, no.4, August 1996. See pages 540-547, figure 5 and abstract --	2-4
A	US 6377945 B1 (RISVIK, K.M.), 23 April 2002 (23.04.02), column 3, line 15 - column 4, line 63; column 7, line 12 - line 49; column 9, line 34 - column 10, line 21, column 11, line 64 - column 12, line 3, abstract --	1-7
A	UKKONEN, Esko: Finding Approximate Patterns in Strings. Journal of Algorithms 6, 132-137 (1985). See page 132-137 and abstract -- -----	1-7

INTERNATIONAL SEARCH REPORT

Information on patent family members

06/09/03

International application No.

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